WHAT IS CLAIMED IS:

1. A transmitting apparatus for transmitting data to a receiving apparatus, comprising:

a generating portion configured to generate a packet by adding a processing time in which said packet is processed at said receiving apparatus to said transmitting data;

a transmitting portion configured to transmit said packet;

a timer portion configured to count a current time;

a memory portion configured to memorize a packet transmission time in which said packet is arrived from said transmitting portion to said receiving apparatus;

a receiving portion configured to receive a request signal from said receiving apparatus, which request a retransmission of said packet; and

an instructing portion configured to instruct said transmitting portion to retransmit said packet based on said current time, said processing time and said packet transmission time , where said request signal is received.

2. A transmitting apparatus according to claim 1, wherein said instructing portion instructs said transmitting portion to retransmit said packet where said current time is earlier than subtracting time obtained by subtracting said packet transmission time from said processing time.

3. A transmitting apparatus according to claim 2, wherein said instructing portion instructs said transmitting portion not to retransmit said packet where said current time is later than said subtracting time.

4. A transmitting apparatus according to claim 1, furthermore comprising:

a calculating portion configured to calculate said packet transmission time based on a transmitting time in which a test packet is transmitted and a receiving time in which a return packet corresponding to said test packet is received.

5. A transmitting apparatus according to claim 4, wherein said calculating portion calculates a maximum number of retransmission of said packet based on said transmitting time and said receiving time.

6. A transmitting method for transmitting data to a receiving apparatus, comprising:

generating a packet by adding a processing time in which said packet is processed at said receiving apparatus to said transmitting data;

transmitting said packet;

counting a current time;

receiving a retransmission request of said packet from said receiving apparatus; and

instructing to retransmit said packet based on said current time, said processing time and said packet transmission time in which said packet is arrived to said receiving apparatus, where said request signal from said receiving apparatus, which request a retransmission of said packet, is received.

7. A receiving apparatus for receiving data which is transmitted from a transmitting apparatus, comprising:

a receiving portion configured to receive a packet transmitted from said transmitting apparatus, which is obtained by adding a processing time in which said packet is processed at said receiving apparatus to said transmitting data;

a timer portion configured to count a current time;

a buffer portion configured to hold said packet until said processing time;

a calculating portion configured to calculate a remaining time in which said packet is outputted from said buffer portion based on said processing time and said current time; and

a transmitting portion configured to transmit a request signal which requests a retransmission of said packet to said transmitting apparatus until said remaining time which reaches a predetermined value where a receive error of said packet occurs.

8. A receiving apparatus according to claim 7, furthermore comprising:

a checking portion configured to check a header of said packet where said receive error of said packet occurs;

wherein said transmitting portion cease from transmitting said request signal where said packet is invalid.

9. A receiving apparatus according to claim 8, wherein said invalid packet is data which is not required to reconstruct said transmitting data.

10. A receiving apparatus according to claim 9, wherein said invalid packet is data which is null data.